FOREWORD

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In 1924 Mr. W. R. G. Bond, Governor of the (then) Fung Province of the Anglo-Egyptian Sudan (since absorbed into the Blue Nile Province, in which Singa is at present a district headquarters), found in the river bed near his house at Singa a fossilized human skull, which was presented to the British Museum (Natural History), and eventually described by Sir Arthur Smith Woodward in *Antiquity* in 1938. A few years later a member of the staff of the Sudan Antiquities Service was sent to Singa to collect more of the fossil bones already reported, and, if possible, stone artifacts. He returned without any artifacts but with some fossils including the important buffalo skull now described by Miss D. M. A. Bate. As soon as my war duties allowed, I paid a visit to Singa and also to Abu Hugar, about 20 miles upstream of Singa, where Bond had reported a fossiliferous limestone conglomerate in which he had found a round stone, possibly an artifact. At Singa repeated quarrying of the limestone deposit for road metal had removed most of the desired evidence, but at Abu Hugar stone implements as well as fossil bones were found *in situ*. There is little doubt that the fossiliferous strata at Singa and Abu Hugar are contemporary.

The fossil bones and stone artifacts from these two sites are the subject of this memoir; and the Keeper of the Department of Geology took advantage of the presence in England of Dr. L. H. Wells, of the Witwatersrand University, to persuade him to re-examine the fossil human skull. Dr. Wells' report is included here. Following the discovery of a negroid skull at Khartoum (described by Dr. D. E. Derry *in* Arkell, 1949), the Singa–Abu Hugar area is the second in the Anglo-Egyptian Sudan at which a fossil human skull, animal bones, and artifacts of human origin have been found in association, and it is one of the first of such sites in Africa to be made the subject of a comprehensive study.

Miss Bate's paper is more than an examination of the fauna of these two sites. It is an important study of Fossil African Buffaloes, which will speak for itself. The archaeological significance of the conclusions of the three experts may be summarized here. Out of all the Stone Age periods in Africa it is most difficult to form a clear picture of the Middle Stone Age, and it is to this period that Mr. Lacaille with every reason assigns the artifacts. He considers that typologically they are nearest to an advanced Levalloisian (or advanced faceted-platform technique) culture from South Rhodesia, and in his opinion are even more advanced.

Dr. Wells, who confirms that the human skull is of pre-Bushman type, considers that it is related to, but naturally in view of the geographical distance separating them, not exactly comparable with, any individual "Bushmanoid" skull from

South Africa. He is inclined to think that the frontal characters of the Singa skull indicate an early stage in the specialization of the Bushman type. Dr. Wells draws attention to the apparent association of the Levalloisian technique with all known skulls of pre-Bushman stock, perhaps in East Africa as well as in South Africa and the Sudan, and also to the possibility that, as Leakey has suggested for Kenya, in north-east Africa the Levalloisian culture developed independently of the Aurignacian (or rather Capsian). He is not, however, prepared to choose between the two possible implications of the recognition of a pre-Bushman type in the Nile valley; but if the Singa skull is an early stage in the specialization of the Bushman type, it seems likely that this type was not native to South Africa, but entered from the north, a solution which would account for the existence of Bushman-like rock paintings in the Libyan Desert and in Spain.

Miss Bate points out that the fauna is characterized by extinct forms, and draws attention to the probability that there was in Africa a big faunal change during the latter part of the Pleistocene, similar to that long recognized in Europe and already recorded for East Africa between the Upper Kamasian and the Gamblian pluvials. If future research should prove that the pluvial periods recognized in Kenya extended at any rate to part of the Anglo-Egyptian Sudan, it might well be established one day that the dark clay of the Gezira plain, which overlies the fossiliferous limestone conglomerate at Singa and Abu Hugar, was laid down during the Gamblian pluvial, and that the Singa skull and its associated artifacts date from before the maximum of that pluvial. Such a conclusion does not appear to be inconsistent with Dr. Wells' view of the skull.

Postscript.—The death of Miss D. M. A. Bate on January 13th, 1951, *after she had corrected the galley proofs of this paper, has deprived prehistorians in general, and those of the Nile valley in particular, of a helper whose skill and wide knowledge were invaluable, for they were unique. She had other collections in hand, and by her study of them, had she lived, more light would have been thrown on past climatic changes in North Africa, on the relations between the fauna of Africa and Asia, and on the origin of some domestic animals. Until someone arises to do Miss Bate the honour of following in her steps, the advance of prehistoric archaeology in North Africa and elsewhere must inevitably slow down.*

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